

Conclusions and = = =
Recommendations of the
Empire Cotton Growing
Committee, on the Indian
Cotton Committee's Report



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in India cottons possess numerous general characteristics in common, many different varieties are in fact grown. In most provinces considerable improvements have in recent years been effected either in agricultural practice or by the introduction of better varieties or both. For various reasons the full commercial results of such improvements have not always been obtained. They conclude, however, that within the next ten years it is improbable that cotton of staple above $1\frac{1}{8}$ " will be forthcoming in India in large commercial quantities, but that within that limit some 700,000 bales should be produced if their recommendations be followed. If also the irrigation scheme known as the Sukkur Barrage Project prove feasible, cotton of a quality unknown in recent times in India could be grown on some 400,000 acres. (3, 4) As it is they consider that several of the Indian cottons are probably suited for certain sections of the hosiery trade in England. (5) This should be investigated.

4. In order to avoid misapprehension the Committee at the outset lay down the principle that in all questions of growing different kinds of cotton the interests of the cultivator are paramount. We heartily agree. A distinction is also drawn between long staple cotton as understood in Bombay and in Lancashire. Cotton actually measuring three-quarters of an inch and over would pass as long staple in Bombay but not in Lancashire. They proceed to classify the different cottons grown in India (i) as definitely short staple, (ii) as long staple within their definition of Bombay requirements, and (iii) as cotton suited for making the class of goods usually made in Lancashire from ordinary American. We accept the classification thus made by the Committee in their table (7) and note that out of a normal crop of $4\frac{1}{2}$ million bales, they estimate that 478,000 bales and 726,000 bales, respectively, would at present fall in their last two classes; but they rather significantly add that these quantities are not realised commercially as in several tracts the varieties named are not marketed pure. (Annexures I, II to Chapter I.)

* 5. The recommendations of the Committee are directed towards three main objects—

- (i) more intensive and widespread agricultural work on cotton and the improvement of agricultural methods and practice in order to evolve where possible, and establish over large areas, strains of improved staple, and to increase everywhere the yield of cotton per acre;
- (ii) improvements in methods of marketing and of handling cotton and the checking of malpractices;

- (iii) better organisation of the different cotton associations and closer co-operation between these bodies and agricultural and Government departments.

There is constant evidence in the Report that the problems connected with the improvement of cotton in India are neither solely agricultural nor solely commercial ; and we are strongly of opinion that if permanent results of commercial value are to be achieved work must, as the Committee advise, be directed towards each of the above three objects.

6. The methods recommended for adoption by the Committee are most easily considered under the headings Agricultural, Irrigational and Commercial.

7. *Agricultural*.—(i) The Committee insist on the need for more detailed botanical investigation of the existing kinds of cotton in most of the cotton growing tracts, accompanied or followed by systematic and methodical trials of varieties to determine the most suitable in order to promote subsequent uniformity of type over wide tracts of country. They consider selection as the first step in evolving better types to be followed by plant breeding, which, however, should be entrusted to selected officers who can devote personal attention and considerable time to it. They also recommend more uniformity in the ways in which preliminary and field tests of different varieties should be conducted. The adoption of a well understood plan for the conduct of such tests enables the work done on selections and new varieties to be more easily followed and the results better understood. (192-195). We endorse all these recommendations.

(ii) The Committee strongly emphasise the need of continued and increased attention to improvements in agricultural practice in its widest sense, including therein the adoption, where possible, of more efficient and remunerative implements, the possibilities of manuring, the rotation of crops, the use of seed drills and harrows, etc. The average acreage yield of cotton in India is 85 lbs., in the United States of America it is 200 lbs. The annual area under cotton in India is $22\frac{1}{2}$ million acres. An appreciable increase in this low yield whether due to improved strains or to improved agricultural methods or both, would, when spread over so large an area, produce greater total results than could be expected from the extension of cotton cultivation to new areas in India. The Committee have found (a) that the areas which can be brought newly under cotton in the existing cotton tracts are very limited ; and (b) after a careful consideration in each province of the possibilities for extension under new irrigational

schemes that only the Punjab and Sind offer any large prospects. These two provinces depend mainly on the same sources of supply for water and it is probable that the various projects might to some extent be mutually destructive. But even assuming such not to be the case and that on investigation all the schemes prove satisfactory and practical (in itself an unwarranted assumption), the Committee estimate the new areas that might be brought under cotton of some kind at about $1\frac{1}{4}$ million acres (37,98,196). Even allowing for an increase in the number of wells, etc., it is clear that more total cotton can be expected from a considerable increase in the average annual yield than from new areas. Hence we associate ourselves with the Committee in emphasising the importance of work directed towards improvements in agricultural practice.

(iii) Regular supplies of pure seed are essential if better crops of higher quality are to be raised and if purity of product is to be attained. We, therefore, concur in the conclusion of the Committee that the production and distribution of pure seed should be controlled by the Agricultural Departments and that the evolution of suitable organisations for seed distribution forms one of their proper duties (197). We also endorse their finding on the importance of demonstrations carried out on the fields of the cultivators (198). We recognise that these duties of testing and discovering improvements in seed and in agricultural practice of demonstrating widely their advantages of organising seed distribution, will occupy much of the time and attention of the Agricultural Departments, and we agree that these departments should be staffed, organised and equipped to discharge such work on an extended scale; otherwise large commercial and economical results will not result from their labours.

(iv) In view of the experience everywhere of the importance of recognising serious crop pests and diseases at an early stage and being in a position to combat them, we concur in the advisability of appointing an additional mycologist and further consider the Committee's advice to cease work on tree cottons to be both prudent and wise. (200, 199).

(v) In order to carry out this programme of work, the Committee place the minimum increase required in the superior staffs of the Agricultural Department at 33 with corresponding increases in the lower grades. Considering the extent and varying conditions of the country the promise foreshadowed by the work already done and the practical and essential nature of the duties assigned to these departments by the Committee we are satisfied that they have asked for the bare minimum necessary. To the

figures given by the Committee, we would add that Egypt even now spends about £10 per 1,000 of population on agriculture as compared with £1·5 in India. (201).

(vi) There will probably be difficulties in recruiting such a number of men promptly. We, therefore, recommend that the Empire Cotton Growing Committee, by means of its sub-committee on Research and Education, should keep the Government of India informed of any schemes they are able to develop for training candidates for agricultural departments.

(vii) Also, in view of the advantages which accrue from experts having opportunities after a short period of service abroad to take special or refresher courses, we recommend that, unless suitable provision already exists, it be suggested to the Government of India to consider the possibility of granting study leave to members of the Indian Agricultural Service. The Empire Cotton Growing Committee will examine what facilities exist in this country for the taking of such refresher courses.

8. *Irrigation*.—The Committee examined carefully in each province the possibility of extending cotton cultivation under irrigation. We have already referred to their main conclusions. They are important, but except in the Punjab and Sind are for the most part limited in scope, *e.g.*, to improvement in wells, etc. We would only refer to one project—*viz.*, the Sukkur Barrage in Sind. The Committee come to a very definite conclusion about this enterprise, and if it be practical the effect on cotton cultivation in India should be most important. Without it they state that all work on exotic cottons in Sind should be abandoned. With it they expect at least 400,000 acres will ultimately be cultivated with cotton of Egyptian quality, or at least with long stapled American varieties. We should point out that this almost equals one quarter of the whole area normally under cotton in Egypt and, though the yield per area cannot be expected to equal that in Egypt, the addition to the world's supply of stapled cotton would still be substantial. The importance of this to the Indian cotton industry and to cotton growing generally is clear. In view of this definite conclusion, we earnestly recommend that the possibilities of this irrigation project be re-examined at an early date. (90 to 98 especially 93, 98 and 38).

9. *Commercial*.—Owing to defective methods of marketing in many parts and to mishandling of cotton, especially at the ginneries and presses, it is reported that the better types of Indian cotton frequently fail to realise their full value in the world's markets; and that cultivators do not always get the full return they

could reasonably expect for the better quality of their produce. The continuance of these drawbacks must hamper all attempts to produce new and better types of cotton on a commercial scale. The Committee attribute these defects to five main causes:—

- (a) mixing of the seed sown by the cultivator either due to carelessness or much more frequently to the fact that only mixed seed is obtainable from the ginneries (214);
- (b) wilful mixing by the cultivator of seed sown—this is rare (214);
- (c) unorganised village sales whereby the cotton passes often in small lots through many hands before reaching the large purchaser (205);
- (d) careless handling of cotton at the ginneries or presses frequently due to lack of accommodation and bad design of the buildings (219); and
- (e) wilful mixing at the ginneries or presses. Cotton is usually described in India by the name of the tract or village from which it comes. Cases came before the Committee in which inferior cotton was railed to ginneries situated in tracts normally producing better quality cotton, there to be mixed with and sold as cotton of that tract (221). Even mill waste is at times consigned to ginneries or presses to be mixed and pressed with good cotton (220). The continuance of such practices must tend to stultify the attempts of the Agricultural Departments and cultivators to produce in quantity improved qualities.

10. The measures proposed by the Committee to meet their evils are as follows:—

(i) *Mixing of seed sown.*—The duty of providing pure seed and organising its supply on an adequate scale has been laid on the Agricultural Departments. If these duties are adequately discharged and the supply of mixed seed from the ginneries checked by the means proposed later by the Committee, the difficulties arising from the cultivators sowing mixed seed will very largely disappear. We agree.

(ii) *Marketing.*—The principle here laid down is not to restrict the ryot's freedom of sale in any way, *e. g.*, by inducing him in certain tracts to sell to one organisation, but to organise the general method of sale so as to leave him freedom and yet draw him steadily into closer touch with large buyers (210, 211). We endorse this. In the initial stages when quantities

of new types are only produced in small quantities the Agricultural Departments must actively assist in the marketing, either (a) as has been done in certain provinces by introducing the growers to particular buyers, or (b) by organising and superintending auctions, a system which has been successful in the Punjab.

There are limits, however, to the scale on which this can be done (209): and for general large scale improvement the Committee advocate (a) the establishment of cotton markets under rules regulating sales on the plan adopted in Berar where the farmer can come into touch with the larger dealers, and where standard weights alone are used and competitive prices easily ascertained and (b) the fostering of co-operative sale by villagers.

We support these recommendations, noting that they involve recognition of the principle that Agricultural officers must interest themselves directly in improving the methods of marketing. This, we believe, to be correct: but it forms an additional reason for the need of adequate district staff and organisation.

11. *Ginneries and Presses.*—The Committee recommend (i) the prohibition by legislation of the transport by rail except under license (a) of cotton in any form except to spinning or weaving mills or to a port (221); and (b) of cotton waste or fly except from one mill to another or to a port (220). We believe that action on these lines is necessary to check mixing. Road traffic will be unaffected. It is difficult to deal with generally and action may prove necessary in only few instances.

(ii) They also recommend that all ginneries and presses be licensed. These licenses would insist on conformity to certain structural designs, obligations to keep machinery properly set, to stamp bales to permit of identification, to use stamped weights, to keep proper records of cotton handled, to submit statistical returns, to conform to regulations regarding the disposal of seed, and to be open to inspection by specified officers, etc. (223 to 225). Many of the better managed ginneries already conform to such conditions. Breach of the terms of the license, or the proof of continued malpractices, *e.g.*, damping, "false packing," etc., will ultimately entail withdrawal of the license by the Local Government. The recommendation to withdraw a license would be tendered to the Local Government by the Central Cotton Committee (see paragraph 15 below) after investigation by the Provincial Committee. These bodies which are organised bodies composed of representatives of the cotton trades and agricultural departments, will be described later. The object is to avoid making breaches of the license penal offences and to secure

the participation of the trade in preventing and remedying abuses. (226—229).

We strongly support the proposal to license all ginneries and presses in the method indicated and consider the proposal to associate the trade in the administration of the Act a wise one.

12. *East India Cotton Association.*—The Committee have also considered the higher trade organisation. At the time of their enquiry there were seven Cotton Associations in Bombay, none representative of the trade as a whole. There were no fixed frequent settlements. Also no grade could be tendered against a future contract except the one grade of the particular class on which the contract was based. The Committee recommend the establishment under Royal Charter of an East India Cotton Association similar to the Liverpool Cotton Association to represent the trade as a whole and to regulate dealings. Draft rules and constitution have been prepared. We have ascertained that the establishment of such an Association in Bombay will be welcomed in Liverpool. It should prove to the general benefit of the cotton trade in India. We hope the scheme will be carried to fruition. (Chapter XVIII).

13. *Standardisation of Weights.*—The weights at present in use in different parts of the country though frequently known by the same name differ in value. The Indian Committee recommend the universal adoption for cotton of the scale 28 lbs. (Avoirdupois) to the maund, 28 maunds (784 lbs.) to the khandi. This is already in use in Bombay and fits in with the 400 lbs. bale of which the recognised tare is 8 lbs. giving a net weight of 392 lbs. or half a candy. This would be a very useful reform and the table is preferable to one based on the maund equal to 82½ lbs. (212, 213).

14. *Statistical.*—The recommendations of the Committee are calculated to improve the crop forecasts and returns of cotton especially those advising—

- (a) the issue of a fifth forecast in April to include the Madras crop;
- (b) that the co-operation of non-officials be sought in estimating the yield;
- (c) that the interest and help of Native States be sought for making these forecasts more correct;
- (d) the compulsory submission of returns from ginneries and presses of cotton ginned and pressed;
- (e) that the Agricultural Departments be responsible for these forecasts:

but in the interests of accuracy we consider that mills should also be compelled to report the quantities of unginned cotton delivered direct to them. (Chapter XVII.)

15. *Central Cotton Committee.*—Finally in its scheme of organisation the Committee recommend the establishment of a Central Cotton Committee at Bombay under the presidency of the Agricultural Adviser to the Government of India. It would be composed of representatives of the Agricultural Departments of the different provinces, of the chief cotton associations and Chambers of Commerce, etc., of a representative appointed by Lancashire interests. For convenience it would often work through smaller similar local committees in the provinces. It would thus be a properly constituted body of non-officials and officials directly interested in and in close touch with cotton; it should ensure closer co-operation between the agricultural departments and the trade which is needed in the interests of both; it should be available to Government for considered advice on cotton matters; it would make recommendations regarding withdrawal of licenses of ginneries and presses (see above); it would arrange for tests and valuations of different varieties of cottons; and it would act generally as a bureau of information on cotton, etc. A permanent Secretary and Technologist would be required (Chapter XIX, 260, 261). We strongly support this proposal. We should be glad to keep in touch with the developments in India of this proposal, and when the time comes to assist in any way in our power in obtaining a Lancashire representative for nomination to this Committee. We believe that such an appointment would promote mutual understanding between two important parts of the Empire on matters connected with cotton.

16. *Finance.*—Funds will obviously be needed to provide for the expansion of the agricultural department even to the minimum estimated as necessary and for this Central Committee. The estimate submitted is R16 lakhs a year, *viz.*, R14 lakhs and R2 lakhs. Considering the small amount at present spent on agriculture in India, the value of the results already attained, and that the benefit to a country from agricultural improvements in its staple crops increases rapidly as those improvements are carried out on a scale sufficiently large to have commercial effect, it is hoped that Government will be able to supply the funds needed. The Committee are however anxious that action should not be deferred for financial reasons, and report that "the evidence they received showed that no objection would be raised if a small cess of eight annas a bale

were levied on all cotton consumed by the mills in India as well as on all cotton exported provided the proceeds of such a cess were definitely earmarked for work on cotton in India." Such a cess would produce about Rs 20 lakhs annually.

17. In conclusion we would especially request very early and sympathetic consideration by the Government of India of the Report of this Committee, and would respectfully advise that early effect be given to the various recommendations, which in our opinion are judicious, well conceived and calculated both to improve cotton in India and to re-act for the material benefit of that country.

Conclusions and Recommendations.

In these recommendations details are avoided.

(i) That in order to obtain permanent improvements in cotton in India on a commercial scale, more detailed agricultural work, better methods of marketing and handling, and closer co-operation between the agricultural departments and the cotton trade interests should all be promoted.

(ii) That in accordance with the Committee's recommendations, more detailed investigations of the existing kinds of plants in cotton growing areas and more systematic tests of different varieties should be made. The work both of selection and plant breeding should be conducted solely "by research officers specially qualified therefor and able to devote their full attention to it." We concur in the Committee's proposals for systematising the methods of field tests.

(iii) That special weight be given to their recommendations (1) on the importance of work directed towards the improvement of agricultural practice in its widest sense: (2) on the need of staffing, organising and equipping agricultural departments on a scale adequate to carry through widespread demonstration work: (3) on the vital necessity of Government control in organising the selection, supply and distribution of pure seed.

(iv) That the recommendations to appoint an additional mycologist and to discontinue work on perennial cottons be adopted.

(v) That the increase asked for in the staff of the Agricultural Departments, which is the minimum that can be expected to discharge the necessary duties assigned to those officers, should be granted.

(vi) That the possibilities of the Sukkur Barrage Project be re-examined.

(vii) That, in accordance with the Committee's recommendations for improving the marketing of cotton, markets should be established under definite rules and regulations, and co-operative sale by the villagers should be encouraged.

(viii) That effect be given to the Committee's suggestions for the licensing of ginneries and presses, and that the needful legislation be introduced. We also support their recommendation that the transport of cotton and waste be controlled.

(ix) That the proposal to form an East India Cotton Association be carried out, since we believe that the formation of an Association on the lines indicated would be of benefit to the Indian cotton trade, and would be welcomed by similar organisations in other countries.

(x) That the standardisation of weights on the plan suggested namely, 28 lbs. (avoird.) to the maund, 28 maunds to the khandi—be adopted.

(xi) That the recommendations for improving crop forecasts be carried out, but that, in the interests of accuracy, the advisability of securing returns of unginned cotton delivered direct to mills be considered.

(xii) That the proposal to form a Central Cotton Committee as outlined in the report be put into effect, and that the Empire Cotton Growing Committee work in co-operation with it, wherever possible, in the interests of cotton production.

Finally, we would request sympathetic consideration for, and early action on, the various recommendations of the Committee which we consider well calculated both to improve cotton growing in India and to promote the material benefit of that country.

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Conclusions and recommendations of the Empire Cotton Growing Committee on the Indian Cotton Committee's Report.

(Dated Martlett House, Bow Street, London, the 1st September 1919.)

WE submit the following statement the result of our consideration of the report of the Indian Cotton Committee. (Numbers in brackets, except where otherwise stated, refer to paragraphs in the Committee's report.)

2. The Indian Cotton Committee was appointed in September 1917 to examine the work done in establishing better cottons in India and to make recommendations. The Committee toured through all the cotton growing parts of India, inspected crops, Government farms, experimental stations, demonstration plots, ginneries and presses, etc., besides obtaining evidence, oral, written or both, from a large number of witnesses—over 300 in all. (2) They have presented a full account of the possibilities and difficulties attending the improvement and development of cotton growing in India and have made a number of specific recommendations covering agricultural, irrigational, statistical and commercial questions.

We recognise that this Committee in India has so simplified our work in reporting on India—in fact what they have accomplished could not have been attempted in London—that we desire to convey to the Government of India our thanks for appointing this Committee and through the Government of India to express to the President and Members of the Committee our appreciation of the thoroughness of the enquiry, the lucidity of the Report, and the practical nature of their advice. In view of the character of the Report we have confined our attention to the main points raised.

3. The Committee place the normal crop in India at $4\frac{1}{2}$ million bales of 400 lbs. each, cultivated on $22\frac{1}{2}$ million acres giving an average yield of 85 lbs. of lint per acre. This is low compared with the average yield in many other countries. The total area over which cotton is grown is widespread, and conditions and seasons vary in different parts of India. Although